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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/756,886

01/08/2004

Fee Chan Leung

CECOM 5405

3598

7590

02/10/2005

U.S. Army CECOM

ATTN: AMSEL-LG-L

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EXAMINER

HARVEY, JAMES R

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/756,886	<b>Applicant(s)</b> LEUNG ET AL.	
	<b>Examiner</b> James R. Harvey	<b>Art Unit</b> 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1-8-04</u> . | 6) <input type="checkbox"/> Other: _____  |

## ***DETAILED ACTION***

### ***Information Disclosure Statement***

- The Information Disclosure statement(s) and related documents that were filed on 1-8-04 have been considered.

### ***Claim Objections***

- Claim(s) 5-7, 9, 15 and 19 objected to because of the following informalities:
  - In reference to Claim(s) 5, 15 and 19, they contain the industry standard name BA-5590/U. The use of an industry standard "BA-5590" in the claims is seen to be indefinite because the industry standard can be revised in the future. Further, the claim scope is uncertain since the possibility of the industry standard revision cannot be used properly to identify any particular structure associated with the industry standard.

For purposes of examination, the claim language is seen to be "wherein the electrical plug is configured to engage an electrical socket of a battery". An examination based on the merits, as best understood, is addressed below.

- In reference to Claim(s) 6, the recitation "the support member" lacks proper antecedent basis.

For purposes of examination, it is assumed that the language is intended to mean "the member". An examination based on the merits, as best understood, is addressed below.

- In reference to Claim(s) 9, claim 9 is dependent upon claim 1. However, claim 9 recites "the electrical disconnect circuit" and this recitation lacks proper antecedent basis.

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For purposes of examination, it is assumed that the numeral 1 was a typographical error and claim 9 was intended to depend from claim 8 which properly introduces the recitation. An examination based on the merits, as best understood, is addressed below.

-- Appropriate response to the above is required.

*Claim Rejections - 35 USC § 102*

- The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

\*\* Claim(s) 1-5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang (5359786).

-- In reference to Claim(s) 1, Huang shows (cover sheet)

a member 15,

an electrical plug 35 ( figure 4 ) supported by the member 15 and the electrical plug 35 being dimensioned and configured to be connectable with an electrical socket C1 ( figure 1C ) of a battery (C ); and

at least one terminal connector 53 connected in circuit ( figures 3 and 4; column 3, lines 28-35 ) with the electrical plug 35 and being located on the member 15.

The meaning of “plug and socket” is not set forth in the claims and is thus deemed to be so broad that it is met by the applied reference showing a male member (plug) that goes into a female member (socket).

-- In reference to Claim(s) 2, Huang shows (cover sheet) the at least one terminal connector 53 has a plurality of terminal connectors (28-31; (cover sheet) ) being disposed symmetrically about a central axis of the member 15.

-- In reference to Claim(s) 3, Huang shows (cover sheet) a battery C having an end (adjacent plate 20 ) the member 15 has a plate portion 20 and a plurality of side wall portions (near the lead line of numeral 37 and 34; (cover sheet) ) which together form a cap structure and wherein the cap structure is dimensioned and configured to fit over and cover the end of the battery (C).

-- In reference to Claim(s) 4, Applicant's specification ( page 7, line 7 ) describes the holding strap as a pair of legs that may be L- shaped in cross section. Huang shows ( figure 4 and (cover sheet) ) the member 15 has a holding strap that is a pair of legs that are L-shaped in cross-section (see examiner's figure) configured to retain the member 15 adjacent the end of the battery.

-- In reference to Claim(s) 5, Huang shows (cover sheet) the electrical plug 33 ( figure 4 ) is configured to engage an electrical socket ( C1; figure 1C ) of a battery ( C ).

The recitation “configured to engage an electrical socket of a battery” is seen to be for the intended use of the claimed structure and is given little patentable weight, since it has been held a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Further, the object of Huang

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invention ( column 2, lines 15-18 ) is “to provide a lamp unit having a battery seat with electricity-conductive terminals disposed such that the seat can accommodate battery packs independent of the brand or configuration.”

-- In reference to Claim(s) 8, Huang shows ( figures 3 and 4 ) an electrical disconnect circuit 46 connected in circuit with the electrical plug 35.

***Claim Rejections - 35 USC § 103***

- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

\*\* Claim(s) 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang.

-- In reference to Claim(s) 6 Huang shows substantially the invention as claimed. However, Huang does not explicitly show that the support member 15 is made from a moldable polymeric material.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the support member 15 of Huang to be made from a moldable polymeric material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. In re Leshin, 125 USPQ 416 (CCPA 1960).

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One skilled in the art would be motivated to choose a polymeric material because it can be used in injection molding machines and injection molding machines require less labor than machining each support member 15 from a solid block with convention rotary cutting tools.

-- In reference to Claim(s) 7, Huang shows (cover sheet) and ( figures 4 and 1C ) the electrical plug 35 is integrally formed with the member 15.

\*\* Claim(s) 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Carney (6508313).

-- In reference to Claim(s) 9. Huang shows substantially the invention as claimed. However, Huang does not teach a comparator.

Carney teaches a comparator ( column 4, line 11.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the comparator circuitry of Carney onto the circuit board 27 of Huang.

One skilled in the art would be motivated to use the comparator and related circuitry of Carney in order to gain the features of Carney's power on reset ( column 4, line 27 ) to shut off the lamp 11 of Huang after a period of time ( column 4, line 18 ) has elapsed, thus extending the life of the battery.

\*\* Claim(s) 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Glasgow ( 5250891 ).

-- In reference to Claim(s) 11, Huang shows (cover sheet)

a member 15,

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an electrical plug 35 ( figure 4 ) supported by the member 15 and the electrical plug 35 being dimensioned and configured to be connectable with an electrical socket C1 ( figure 1C ) of a battery ( C );

at least one terminal connector 53 located on the member 15,

an electrical disconnect circuit 46 connected in circuit with the electrical plug 35.

However, Huang does not show an electrical down converter circuit connected in circuit with the electrical plug.

Glasgow teaches an electrical down converter circuit 15 ( column 3, lines 25-30 ).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve the lantern configuration of Huang's by incorporating the charging circuitry of Glasgow on the circuit board 27 of Huang.

One skilled in the art would be motivated to include a charging circuitry in order to give the customer choices as to either replacing the discharged battery or recharging the discharged battery if a charged battery is not available.

-- In reference to Claim(s) 18, Huang shows (cover sheet)

a member 15,

means 35 for electrically connecting with an electrical output (C1) of a battery ( C ), the battery connecting means being supported by the member 15;

terminal connector means 53 for connecting with a lantern 11 and the terminal connector means 53 being located on the member 15.

However, Huang does not show

means for disconnecting the battery at a predetermined voltage; and



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means for down-converting a voltage of the battery.

As discussed in claim 11 above, Glasgow teaches an electrical down-converting circuit that can be used for down-converting a voltage of the battery.

Glasgow also teaches means for disconnecting the battery ( column 3, line 40 ) at a predetermined ( column 3, line 43 ) voltage.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve the lantern configuration of Huang's by incorporating the charging circuitry of Glasgow on the circuit board 27 of Huang.

One skilled in the art would be motivated to include a charging circuitry in order to give the customer choices as to either replacing the discharged battery or recharging the discharged battery if a freshly charged battery is not available for replacement.

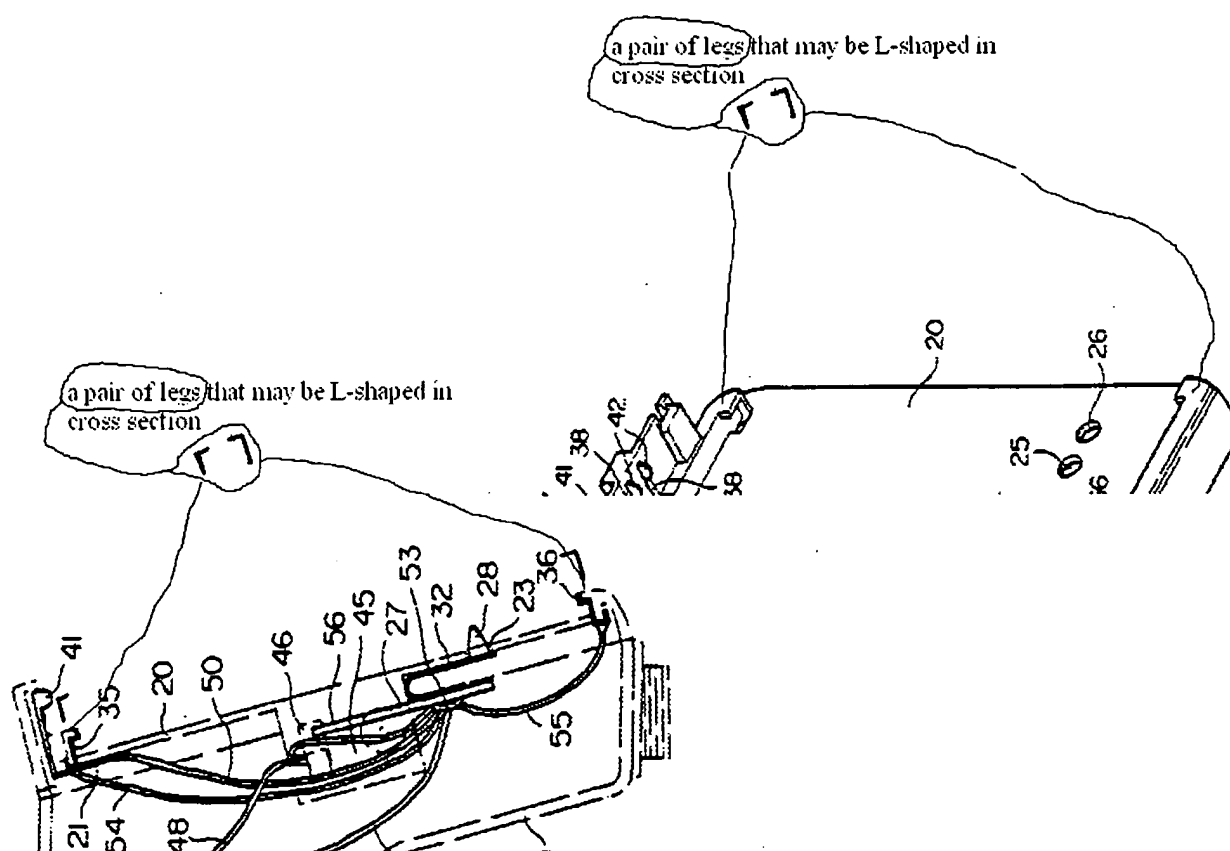
-- In reference to Claim(s) 10, as discussed in the rejection of claim 11 above, Huang, as modified by Glasgow, shows a DC voltage down-converter circuit connected in circuit with the electrical plug 35.

-- In reference to Claim(s) 12, Huang shows (cover sheet) the at least one terminal connector 53 has a plurality of terminal connectors (28-31; (cover sheet) ) being disposed symmetrically about a central axis of the member 15.

-- In reference to Claim(s) 13, Huang shows (cover sheet) a battery C having an end (adjacent plate 20 ) the member 15 has a plate portion 20 and a plurality of side wall portions (near the lead line of numeral 37 and 34; (cover sheet) ) which together form a cap structure and wherein the cap structure is dimensioned and configured to fit over and cover the end of the battery ( C ).

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-- In reference to Claim(s) 14, Applicant's specification ( page 7, line 7 ) describes the holding strap as a pair of legs that may be L- shaped in cross section. Huang shows ( figure 4 and (cover sheet) ) the member 15 has a holding strap (see examiner's figure) configured to retain the member 15 adjacent the end of the battery.



-- In reference to Claim(s) 15 and 19, Huang shows (cover sheet) the electrical plug 33 ( figure 4 ) is configured to engage an electrical socket ( C1; figure 1C ) of a battery ( C ).

The recitation “configured to engage an electrical socket of a battery” is seen to be for the intended use of the claimed structure and is given little patentable weight, since it has been held a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Further, the object of Huang invention ( column 2, lines 15-18 ) is “to provide a lamp unit having a battery seat with electricity-conductive terminals disposed such that the seat can accommodate battery packs independent of the brand or configuration.”

-- In reference to Claim(s) 16 and 20 Huang, as modified by Glasgow, shows substantially the invention as claimed. However, neither Huang or Glasgow explicitly show that the support member 15 of Huang is made from a moldable polymeric material.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the support member 15 of Huang to be made from a moldable polymeric material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. In re Leshin, 125 USPQ 416 (CCPA 1960).

One skilled in the art would be motivated to choose a polymeric material because it can be used in injection molding machines and injection molding machines require less labor than machining each of Huang’s support member 15 from a solid block with convention rotary cutting tools.

-- In reference to Claim(s) 17, Huang, as modified by Glasgow, shows (cover sheet; Huang ) and ( figures 4 and 1C; Huang ) the electrical plug 35 is integrally formed with the member 15.

*Conclusion*

Effective May 1, 2003, the United States Patent and Trademark Office has a new Commissioner for Patents address. Correspondence in patent related matters must now be addressed to:

**Commissioner for Patents**

**P. O. Box 1450**

**Alexandria, VA 22313-1450**

For additional information regarding the new address, see Correspondence with the United States Patent and Trademark Office, 68 Fed. Reg. 14332 (March 25, 2003).

- The prior art listed on PTO form 892 that is made of record and not relied upon is considered pertinent to applicant's disclosure because it shows the state of the art with respect to applicant's claimed invention. In particular reference to Confrey teachings, Confrey teaches a way to mount a flashlight to a radio. Witte shows a similar configuration as applicant's, but element 11 is a casing and not a battery (the battery is within housing 16 ( figure 3 ) ).

- Any inquiry concerning this communication or earlier communications from the examiner should be directed to James R. Harvey whose telephone number is 571-272-2007. The examiner can normally be reached on 8:00 A.M. To 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800 extension 33.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2800.

- Effective **October 1, 2003**, all patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, **(703) 872-9306**, with a few

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exceptions. *See Fax Automation in Technology Center 1700, 1237 Off. Gaz. Pat. Office* 140 (August 29, 2000). Unofficial correspondence such as draft proposed amendments for interviews may continue to be transmitted by facsimile to the Technology Centers.

- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James R. Harvey, Examiner

jrh

February 7, 2005

A handwritten signature in dark ink, appearing to be 'JRH', is written over a horizontal line. The signature is stylized and cursive.